Everything you need for sewing success

AUTOMATED SEWING SYSTEMS
FOR DIGITAL PRINT – TEXTILE PROCESSING

MADE IN GERMANY
Configure an Impulsa synchronized sewing system in three easy steps:

1. select a conveyor system,
2. select a sewing workstation and
3. add your application guides.

Conveyor Systems

Impulsa offers two types of conveyors: the ECO and the Multiflex. The Synchronatic ECO is compatible with a single sewing workstation whereas the Synchronatic Multiflex allows you to dock multiple sewing workstations so you can move easily from one application to another.

Both conveyor systems:
- Are available in widths from 0.7 to 1 meter
- Are available in lengths from 2 to 10 meters
- Synchronize with the sewing workstation using servos and PLC
- Can sew continuously without breaks from start to finish
- Include automatic return at the end of the piece
- Automatically reverse at the beginning and end of each piece for reinforcement
- Automatically cut thread
- Are available for use with multiple sewing workstations (Multiflex) or just one (ECO)

Sewing Workstations

The Synchronatic Series is compatible with two types of sewing heads: Werkmeister and Dürkopp Adler. Choose between a single or double-needle head and the number of synchronizations needed as determined by the type of finishing that is required.

<table>
<thead>
<tr>
<th>Brand</th>
<th>Number of Needles</th>
<th>Number of Syncs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Werkmeister</td>
<td>Single / Twin</td>
<td>4</td>
</tr>
<tr>
<td>Dürkopp Adler</td>
<td>Single / Twin</td>
<td>4</td>
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Needle Cooling

The Synchronatic Series can run at up to 4000 stitches per minute, causing the needle to become hot which can melt monofilament thread and the keders used for Silicon Edge Graphics (SEG). An optional Needle Cooling feature can be configured on all three workstations to prevent this.
**Application Guides**

**This is where Impulsa really excels.** Be ready for any order with numerous stock sewing guides and custom guides made to order for virtually endless applications. All application guides are compatible with any of the three sewing workstations.

Some popular stock guides include:
- Single hem guide, various widths
- Double hem guide, various widths
- Adjustable hem guide, 20 mm – 120 mm
- Adjustable pole pocket guide, 20 mm – 120 mm
- Adjustable hook-and-loop guide, 13 mm – 72 mm
- SEG guides, various widths
- Flag header guide, various widths
- Round keder guide
- Binding device for flag tape – adjustable to 240 mm

**ATAS**

A common problem in SEG production occurs when the keder is stretched as it is fed into the sewing head and the fabric along the seam puckers as a result.

The ATAS automatic keder feeding system is exceptional. It uses a dancing sensor to create slack as the keder unwinds and, since it is synchronized with both, feeds the keder at the same speed as the conveyor and sewing head.*

This process results in a tension-free sewing path with perfectly smooth seams.

Program the keder width into the sewing workstation and the ATAS will automatically cut the keder at the correct length to allow for perfectly folded corners. The end of each edge is automatically backstitched, the thread is cut and the operator is ready to move on to the next side.

The ATAS synchronized unwinder Needle Cooling here is critical. At up to 4000 stitches per minute the needle can become quite hot and gum up the keder material, resulting in messy, unreliable seams.

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* ATAS automatic keder feeding system

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SAM – Seam Automatic Motion

Guiding just like rails.

Created to reach autonomous sewing. SAM is the next step.

- just place the piece on the conveyor
- feed easily into the sewing tool e.g. to sew SEG “Keder”
- hit the “kick pedal” – unique only by Impulsa
- SAM is landing on the material – starting and guiding continuous sewing
- the machine detects end of the piece automatically and performs all operations until automatic thread trimming
- SAM is taking off
- you may use SAM with or without ATAS

In 2019 we are near to autonomous sewing.

The pioneers in synchronized sewing

Impulsa has led the synchronized sewing market in the awning industry for over 30 years and has over 900 sewing equipment installations in Europe. The company is first and foremost a sewing automation company that solves customer problems with endless combinations of conveyor sizes and hundreds of application guides for sewing, hemming, Velcro and keder. Impulsa customers get the best sewing automation systems, built with quality German engineering

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